

Translation

PATENT COOPERATION TREATY

PCT/EP2003/012393



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference rc 111202/PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2003/012393	International filing date (day/month/year) 06 November 2003 (06.11.2003)	Priority date (day/month/year) 06 November 2002 (06.11.2002)
International Patent Classification (IPC) or national classification and IPC C03B 1/02, 5/00, C03C 1/00, 1/02, 13/06		
Applicant ROCKWOOL INTERNATIONAL A/S		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☒ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☒ Box No. VIII Certain observations on the international application

Date of submission of the demand 03 June 2004 (03.06.2004)	Date of completion of this report 02 May 2005 (02.05.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/012393

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-11 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ 1-13 _____ received by this Authority on _____ 22 April 2005 (22.04.2005)
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/012393

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

See the supplemental sheet

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

In view of the defects cited and the observations set forth in Boxes III and VIII, the examination is based on the following wording for claim 1:

"a method for producing a mineral melt for the production of mineral fibres, [...], according to which method a mixture is produced comprising residual materials, at least between 38 and 64 wt. % thereof being from the production process, and [...] correctors for adjusting the required composition and viscosity of the melt, said residual materials and correctors then being comminuted and, together with a binder, pressed to form moulded briquettes which are added to a melt aggregate, the correctors [...] comprising between 2 and 25 wt. % of granular combustion residues".

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

**Non-establishment of opinion with regard to novelty,
inventive step and industrial applicability**

The amendments submitted with the letter of 22 April 2005 introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. The amendments concerned relate to claims 1 and 9:

- a) The inserted specification, "between 5 and 45 wt. % of correctors", is not disclosed in the original application.

It appears that, in fact, the values here specified relate to the total weight percent of converter slag, casting slag and melt chamber granulated material used in the first embodiment. However, said materials are present in specific relative weight ratios, which is not clear from the generalisation apart from the reference to optional use of other materials as correctors, and it also unclear why the "between 10 and 25 wt. % of Al_2O_3 carriers, for example bauxite" in said embodiment was not included in the total, since these too are "regarded as essential correctors" according to the description (page 3, line 9).

Furthermore, the original application also fails to disclose the feature that the "further constituents
/...
of the mixture" can contain up to between 2 and

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

of the mixture" can contain up to between 2 and 25 wt. % of combustion residues.

- b) Claim 9 specifies that "between 2 and 5 wt. % of correctors are substituted by combustion residues" although said materials already comprise 25 wt. % of combustion residues. This further increase in combustion residues by between 2 and 5 wt. % is not disclosed in the original application.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/12393

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: US-A-4 617 045

D2: WO-A1-0076929

D3: WO-A-9928248

D4: US-A-4 287 142.

2. The method defined in claim 1 differs from the method disclosed in D1 by virtue of:

- a) the use of "between 38 and 64 wt. % of the residual materials from the production process";
- b) the comminution of "the residual materials and the correctors";
- c) the use of "between 2 and 25 wt. % of granular combustion residues".

With regard to feature a), the applicant is advised that this feature is known from D1 (see in particular column 1, lines 35-46) and, moreover, that for a person skilled in the art the recycling of waste that originates from the manufacturers' own

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production process, and therefore has known properties, is an obvious measure if only for reasons relating to the reduction of process costs. Thus, a person skilled in the art would increase the mixture proportion of residual materials that originate from the production process, if the intended fibre composition and melt process permit thereof. Each of documents D2 (in particular page 14, lines 2-6; page 17, line 10), D3 (in particular page 8, line 26) and D4 (in particular column 3, table) demonstrates the use in different mixtures of different proportions, ranging from 25 to 80 wt. %, of residual materials from the production process.

With regard to feature b), it is pointed out that the comminution of constituents of the mixture is known, being a standard procedure with known advantages such as the enhancement of homogeneity or the acceleration of the melt process (D1: column 3, lines 10-11 and line 16; column 5, lines 30-35). For a person skilled in the art this procedure is implicit.

In respect of feature c), D1 (in particular column 3, lines 20-64) discloses the use of between 5 and 30 wt. % of "bottom ash", that is to say combustion residues, in a form that is sand-like (column 3, line 47), that is to say granular.

In consequence, the method according to claim 1 fails to meet the requirements of PCT Article 33(3).

/...

3. Claims 2-13 appear to contain no features that are unknown to a person skilled in the art or go beyond the conventional procedure for solving the problem of interest, for example process optimisation or obvious alternative features, since for a person skilled in the art the advantages thereof are readily identifiable.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- a) Owing to the use of the expressions "in particular" and "preferably", claim 1 includes optional features that do not restrict the subject matter of the claims (see point 1.).

Since it is not specified that the expression "residual materials originating from the production process" concerns the production of mineral fibre products, it remains unclear to what production process this feature actually relates.

- b) In claim 11, the figure of 0 mm in respect of the granulation of the corrector materials lacks clarity.

3. Claims 2-13 appear to contain no features that are unknown to a person skilled in the art or go beyond the conventional procedure for solving the problem of interest, for example process optimisation or obvious alternative features, since for a person skilled in the art the advantages thereof are readily identifiable.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- a) Owing to the use of the expressions "in particular" and "preferably", claim 1 includes optional features that do not restrict the subject matter of the claims (see point 1.).

Since it is not specified that the expression "residue materials originating from the production process" concerns the production of mineral fibre products, it remains unclear to what production process this feature actually relates.

- b) In claim 11, the figure of 0 mm in respect of the granulation of the corrector materials, lacks clarity.

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